CIVIL TECH LABS

Accredited by NABL as per ISO/ IEC 17025 : 2005

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027

Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654

To,

Assistant Executive Engineer
Kodegahalli Sub Division,
BBMP.

18th April 2015

Dear Sir,

Sub: Testing of Bituminous Macadam.

As requested, the required tests were carried out for the Bituminous Macadam samples supplied by you, for the work of **'Improvements to side in DEO -Residency layout in ward no 07, Byatarayanapura Kodegahalli Sub Division.**

Please find the enclosed Test Report of the above.

Thanking You,
For Civil Tech Labs

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS
5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

GRADATION TEST ON BITUMINOUS MACADAM MIX GRADE - 2

Name & Address of the Customer	AEE, Kodegahalli Sub Division, BBMP
Name of Work	Improvements to side in DEO -Residency layout in ward no 07, Byatarayanapura Kodegahalli Sub Division.
Name of the Agency	M/s. Sathya Construction Bangalore.
Date of Testing	18/04/2015
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2011)

	Sample-1		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-4 for BM Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
26.5	100	**100**	**Satisfies the requirements**
19	90-100	**99.1**	
13.2	56-88	**75.3**	
4.75	16-36	**28.4**	
2.36	4-19	**16.9**	
0.3	2-10	**7.3**	
0.075	0-8	**6.5**	

AE-1

Note:

1. The results relate only to the items tested.
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4. The results are based on the test conducted on samples supplied by the customer.

Lab Incharge
Civil Tech Labs

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TEST REPORT

GRADATION TEST ON BITUMINOUS MACADAM MIX GRADE - 2

Name & Address of the Customer	AEE, Kodegahalli Sub Division, BBMP
Name of Work	Improvements to side in DEO -Residency layout in ward no 07, Byatarayanapura Kodegahalli Sub Division.
Name of the Agency	M/s. Sathya Construction Bangalore.
Date of Testing	18/04/2015
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2011)

	Sample-2		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-4 for BM Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
26.5	100	**100**	**Satisfies the requirements**
19	90-100	**98.4**	
13.2	56-88	**76.2**	
4.75	16-36	**29.2**	
2.36	4-19	**15.9**	
0.3	2-10	**7.5**	
0.075	0-8	**6.8**	

Note:

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TEST REPORT

TEST ON THE DETERMINATION OF BITUMEN CONTENT ON BITUMINOUS MACADAM MIX-GRADE 2

Name & Address of the Customer	AEE, Kodegahalli Sub Division, BBMP
Name of Work	Improvements to side in DEO -Residency layout in ward no 07, Byatarayanapura Kodegahalli Sub Division.
Name of the Agency	M/s. Sathya Construction Bangalore.
Date of Testing	18/04/2015

A)

Sl. No.	Test	Test Method	Technical Reference
1	Extraction of mineral aggregate	**Test Method A (Centrifuge Method)**	**ASTM: D2172/ D2172M-11**
2	Determination of amount of mineral matter/fines in the extract	**Ashing Method**	

B)

Specification: As Per MORTH (4th Revision) Table 500-4 BM-Grade -2, Bitumen Content for BM Grade-2 is 3.3 % TO 3.5 %		
Sl. No.	**Description**	**Values**
1	Weight of bituminous mixture before extraction test, **W_1 g**	**2000**
2	Weight of mineral aggregate obtained from centrifuge extractor, **W_2 g**	**1921.56**
3	Weight of mineral matter in the total volume of extract (by ashing), **W_3 g**	**11.32**
4	Total weight of aggregate in the bituminous mixture, **W_4 g = (W_2 +W_3) g**	**1932.88**
5	Total weight of Bitumen extracted from the mixture, **W_5 g = (W_1-W_4) g**	**67.12**
6	Bitumen content in **%, (W_5/W_1) %**	**3.36**

Remarks	**Satisfies the requirements.**

Note:

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T-2654

To,

Assistant Executive Engineer
Kodegahalli Sub Division,
BBMP.

21st April 2015

Dear Sir,

Sub: Testing of Bituminous Concrete.

As requested, the required tests were carried out for the Bituminous Concrete samples supplied by you, for the work of **'Improvements to side in DEO -Residency layout in ward no 07, Byatarayanapura Kodegahalli Sub Division'.**

Please find the enclosed Test Report of the above.

AE-7

Thanking You,
For Civil Tech Labs

Khushboo

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS
5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

TEST REPORT

TEST ON DETERMINATION OF BITUMEN CONTENT ON BITUMINOUS CONCRETE MIX-GRADE 2

Name & Address of the Customer	AEE, Kodegahalli Sub Division, BBMP
Name of Work	Improvements to side in DEO -Residency layout in ward no 07, Byatarayanapura Kodegahalli Sub Division.
Name of Agency	M/s. Sathya Construction Bangalore.
Date of Testing	21/04/2015

A)

Sl. No.	Test	Test Method	Technical Reference
1	Extraction of mineral aggregate	**Test Method A (Centrifuge Method)**	**ASTM: D2172/ D2172M-11**
2	Determination of amount of mineral matter/fines in the extract	**Ashing Method**	

B)

Specification: As Per MORTH (4th Revision) Table 500-18, Bitumen Content for BC Grade-2 is 5% to 7%		
Sl. No.	**Description**	**Values**
1	Weight of bituminous mixture before extraction test, **W_1 g**	**2000.00**
2	Weight of mineral aggregate obtained from centrifuge extractor, **W_2 g**	**1873.90**
3	Weight of mineral matter in the total volume of extract (by ashing), **W_3 g**	**13.51**
4	Total weight of aggregate in the bituminous mixture, **W_4 g = (W_2 +W_3) g**	**1887.41**
5	Total weight of Bitumen extracted from the mixture, **W_5 g = (W_1-W_4) g**	**112.59**
6	Bitumen content in **%, (W_5/W_1) %**	**5.63**

Remarks	**Satisfies the requirement.**

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TEST REPORT

GRADATION TEST ON BITUMINOUS CONCRETE MIX GRADE - 2

Name & Address of the Customer	AEE, Kodegahalli Sub Division, BBMP
Name of Work	Improvements to side in DEO -Residency layout in ward no 07, Byatarayanapura Kodegahalli Sub Division.
Name of Agency	M/s. Sathya Construction Bangalore.
Date of Testing	21/04/2015
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2011)

	Sample-2		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-18 for BC Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
19	100	**100**	**Satisfies the requirements**
13.2	79-100	**98.9**	
9.5	70-88	**83.6**	
4.75	53-71	**64.2**	
2.36	42-58	**49.1**	
1.18	34-48	**38.2**	
0.6	26-38	**32.9**	
0.3	18-28	**23.4**	
0.15	12-20	**15.6**	
0.075	4-10	**7.1**	

Note:

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Lab Incharge
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T-2654

To,

Assistant Executive Engineer
Kodegahalli Sub Division,
BBMP.

23rd April 2015

Dear Sir,

Sub: Improvements to side in DEO -Residency layout in ward no 07, Byatarayanapura Kodegahalli Sub Division'.
Testing of cubes – Reg.

As requested the 7th day Compressive Strength Test of Cubes was carried out for the above work for the samples supplied by you.

Please find the enclosed Test Report of the above.

Thanking you,

For Civil Tech Labs,

(KHUSHBOO L.)
Quality Manager

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TEST REPORT

COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

Name & Address of the Customer	AEE, Kodegahalli Sub Division, BBMP
Name of Work	Improvements to side in DEO -Residency layout in ward no 07, Byatarayanapura Kodegahalli Sub Division.
Name of Agency	M/s. Sathya Construction Bangalore.
Grade of Concrete	M-20
No. of cubes tested	3
Dimension of Specimen	150mmx150mmx150mm
Cross Sectional Area	22500 mm²
Technical Reference	IS: 516-1959 (Reaffirmed 2013)

Sl. No.	Identification	Date of Casting	Date of Testing	Age at test (Days)	Weight (Kg)	Failure Load (KN)	Compressive Strength (N/mm²)	Avg Compressive Strength (N/mm²)
1	CC-Work (Drain)	16/04/2015	23/04/2015	7	8.18	336	**14.93**	**14.84**
2					8.16	332	**14.76**	
3					8.17	334	**14.84**	

AE-I

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Lab Incharge
Civil Tech Labs